



JUN 0 5 2001

# **TECH CENTER 1600/2900** BEST AVAILABLE COPY ATTORNEY DOCKET NO: Q61014

Group Art Unit: 1642

Examiner: N. Davis

PATENT APPLICATION

#### THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Yoji IKAWA, et al.

Appln. No.: 09/670,568

Confirmation No.: Not Yet Assigned

Filed: September 27, 2000

HUMAN p51 GENES AND GENE PRODUCTS THEREOF For:

#### SUBMISSION OF FORMAL DRAWINGS

Commissioner for Patents Washington, D.C. 20231

Sir:

Submitted herewith please find 15 sheets, (Figures 1-15) of formal drawings. The

Examiner is respectfully requested to acknowledge receipt of these formal drawings.

Respectfully submitted,

Registration No. 24,861

Waddell A. Biggart

SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC 2100 Pennsylvania Avenue, N.W. Washington, D.C. 20037-3213

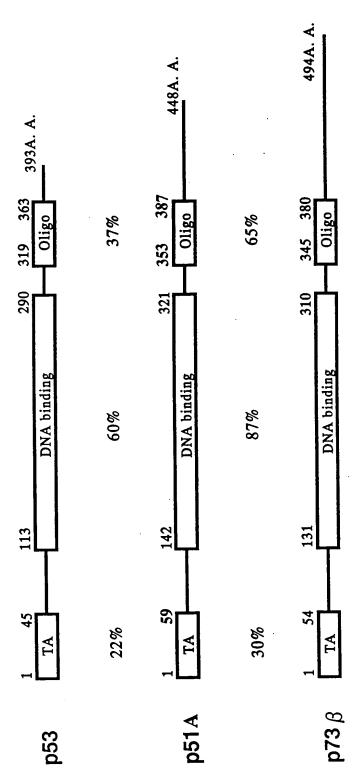
Telephone: (202) 293-7060 Facsimile: (202) 293-7860

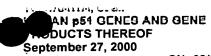
Date: May 11, 2001

JI INAWA, et al.

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PRODUCTS THEREOF
September 27, 2000

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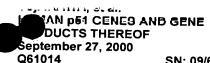




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pS1A p73ß pS3 Consensus	PSQSTQTNEF LSPEVFQHIW DFLEQPICSV QPIQUNFVDE PSEDGATHKI HAQSTATSP- DGGTTFEHLW SSUE-POSTYFOUP-QSS RGNNEVVGGT HEEPQSDPS- VEPPLSQETF SOLWHLL PENNVLSPLP W.QST.TPFQH.W SILE-PDL P.NN	50 45 36 50
p51A p73ß p53 Consensus	EISMOCIRMO DSDLSDPHWP OYTHLGLLNS MOQQIQNGSS STSFYNTDHA DSSMOVFHLEGHTTSVMA OFHLLSS THOOMSSRAA SASFYTPEHA SQAMODLMLSPODI-E ONFTED PGPDEAPRMP EAAF-RVARASMOLD QR. SASEYHA	100 90 76 100
p51A p73ß p53 Consensus	ONSVTAPSPY AGESSTEDAL SPSPA PSHT DYFOPHSFOV SFOXOSTAKS -ASVPTHSPY AGESSTEDTH SPAPVIPSHT DYFOPHHEV THOUSTAKS -PAAPTPAA- PAFAPSH-PL SSSVPSOK TYXOSYDERL DELISOTAKSSVPTPSPY AGESSTED.L SPSP. IPSHT DOROPH IB.V IEXTSAKS	150 139 121 150
p51A p73ß p53 Consensus	ATHTYSTELK REVCCHAKTE FIGURATEP FEGAVERAUP VYRKAERATE ATHTYSPULK REVCCHAKTE FIGURASTEP FEGTATRAUP VYRKAERATD VTCTYSPALM REFCCUAKTE FACERADSTP FEGTERRAUA TYKOSCHATE ATHTYSPULK REVCCHAKTE FIGURALTER FEGT. TRAUP VYRKABERITE	200 189 171 200
p51A p73β p53 Consensus	WHECHHEL SREFNEDDIA FPSHLIRVEG NSHADOVEDP TTURGSVIVE WHECHHEL GROFNEDDSA FASHLIRVEG NULSDVIDDP VTURGSVIVE WARCHHER CSD-SIQ-UA FPCHLIRVEG NLRVEYLOCK HTERESVIVE DOMBCENHEL ROFNEDDIA EPSHLIRVEG N ODVODP ITURGSVAVE	250 239 219 250
p51A p73ß p53 Consensus	YEPFOYOTEF TTYLYNHUCH SSONGONRR PILITYTLET RECOVLGRRC YEPFOYOTEF TTTLLYNHUCH SSONGONRR PILITYTLEM RECOVLGRRS YEPFEYOSDC TTTLHYNHUCH SSONGONRR PILITYTLED SSONILGRNS YEPEOYOTEF TTTLLYNHUCH SSONGONRR PILITYTLE. RECOVLGRRS	300 289 269 300
p51A p73B p53 Consensus	FERRICACPG RORKALEDSI RKQQVSDS TKNGDGTKRP FRQNTHGI-Q FEGRICACPG RORKALEDHY REQQALNESS AKNGAASKRA FKQSPPAVPA FENRVCACPG RORKTEEENL RKGEPHH ELPPGSTKRA LPNNTSS EE HICACPG RORKADED BKQQS .KNGTKBA F.QNT	347 339 314 350
p51A p73B p53 Consensus	H-TSINKRS PODELLYLDY RGRETYBALL KINESLELAG YLPOHTIETY LGAGYAKRA DEEDTYYLDY RGRENHEILM KLAESLELAE LYPOPLYDSYSPOPKKEP UCGEYFTLOI RGRERHEAFR ELNEALEUKD AQAGKEPGGSMKR. ID.EYLDY RGRE.REAL. KLAESLELMPQY	396 389 362 400
p51A p73β p53 Consensus	RQQQQQQHQ- HLLOR-HLLSACFRNE LV-EPRRE RQQQQLLQRP SHLDPPSYGP VLSPMHKYHG GMNKLPSVNQ LVGQPPPHSS RAHSS HL KSKKGQSTSRH BQQQQ HL LL-HNQ LV-P.RH	427 439 380 450
p51A p73β p53 Consensus	TPKQSDVFFRHS KPPNRSVYP- AATPNLGPVG PCHLNNHGHA VPANGEMSSS HSAQSMVSGS HCTPPPPYHAKKLMFKT EGPDSDTPKLVMFHPPNS.Y	448 489 393 500
p51A p73β p53 Consensus	DPSLVRTWGP	448 499 393 510



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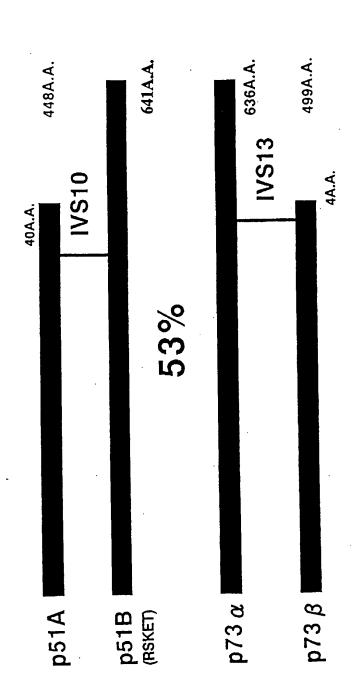


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p518 p73d	MSGSTOTHEF LSPEYTHAN DALIDATICSV OPTOLINFVDE PSEDGATHKI MAGSTATISP- DGGTTHANUN SSLEHADSTYRDIP-OSS RCHNEVVGGT	50
Consensus	MI OZDITI BINIM TITLE TOTAL OZZ KONKEARCEL	45 50
p518 p73a	ESARCIRMO DSDLSDEMME OYTHLOLDIS MODOLONGSS PISEMYTHAD DSSMOVEHLECHTTSVIM OFHLUSS MODOLSSRAA SASEMYTERIA	100 90
Consensus	שון הפוצו לי ביו לי	100
p51B p73d	ONSYTAYSPY AOPSSTEDAL SPERIFISHT DYPOPHERY REGOSSTAKS -ASYPTHSPY AOPSSTEDTH SPARNIPSHT DYPOPHERY REGOSSTAKS	15 <del>0</del> 139
Consensus	. LSV . LSPY ADOSSTED . SHIELD IN THE THE LE	150
p51B p73d	ATWTYSTELK KLYCQIAKTC PIQIKYTPP PHOAVIRAMP VYKKAEMYTE ATWTYSPULK KLYCQIAKTC PIQIKYSTPP PHOTAIRAMP VYKKAEMYTD	2 <del>00</del> 189
Consensus	LINTYS. LLK KLYCGIANTE PIQIN TEP HID. ITRAHP WKKAFING.	200
p518	VVKRCPNHEL EREFNECGIA RESHLIRVEG USHAOTVEDP UTGROSYUVA	~~
p73d	VVKRCPNHEL KAMPFHEGGSA ALSHLIRVEG NHLSOVYDOP KTGROSYLVA	25 <del>0</del> 239
Consensus	powersment ly lenery in a permanent. They properly has	250
pS1B	YEPPOVOTEF TINLYNFHON SSOVGOHNRE PILITYTLET ROGOVLGERIC	300
p73a	YEPPOVOTEF TITLYHEMCH SSCVGOHNRR PILITYTLEH ROGOVLGRAS	289
Consensus	TARBEDONCTER THE LEAVENCY SECNOCOMBER 51: 14 1114. BOCCONTORY	300
pS1B	FEARICACPG RORKADECSI PAROVSD- S TKHODGKAP PAROTHGI-Q	347
p73a Consensus	FERRICACPG RORKADEDHY HEGGALNESS AKNGAASKAA HIGSPPAVPA EEI RICACPG RORKADED. IE IQQ IS. IKNO KB. IE IQ	339
Consensus	•	350
p51B p73α	M-TSIKKRAS ADDELYYLAY RORETYBYLL KAKESLELMO YUPOHTIETY LGAGYKKRAH ODEDTYYLAY RORENAETAN KAKESLELMO YUPOHTIETY	396
Consensus	IXXBB. III IXII V RCRB. B.U. IN XESLELM. INC. IX	389 400
p518 p73α	POOOOOO LLOROTSIOS PESYONSSAP UMANH-SHIK LPSYSQUTHP	445 433
Consensus	a. dd. u.d. d. lelszd. lellud. huk resulou.	450
-610	many tells to a divise the firm of the constitution of the constit	
p51B p73α	OORNALTFITT IPDOGGANIP PHOCFFIEDRIAG DINGIGERTOA LEPPHISHFST PPPHSSAATP NLGPYGPG MLNHHGHAVP ANGENSISSHSAGSHYSG	495 478
Consensus		500
pS18	SHCTPPPPPP TOGATIVEFUL ALCOSSIDLE FINGOLITIES DIEHYSHOOL	545
p73a	SHCTPPPPPH ACHSHUSFUT OLGOPHOLEY FTSOCIOSIY HLONLTIEDY	528
Consensus	हिम्पटा १९४८ में विश्विम मिली. मिली. मि. इन मिली. ग्रेस्टी मिली. ग्रेस्टी	550
p <b>518</b>	AGUKIPEGIR HAINIGIUGH AGUHEAGSPS HULATPSGAS TVSVGSGATA GAUKIPEGIR MINAGUGU AGUHONSTAQ GULASSARAN ISIGGSGALQ	595
p73d Consensus		578
Consensus	ाष्ट्राह्न हिंग ग्रम्म प्रवास विसिष्ट हिंग हिंग हिंग हिंग हिंग हिंग हिंग हिंग	600
p51B p73d	GERVITANE TUROTISER R DE NOTHEDION RRIKODIKE	638
Consensus	RORVMEAVEL RUTHITITIEN ROCEPOGGEDE NODEGED DO CKARNOLIKE	628 650
		550
p518 p73a	(चेर्राह्म हर्माह्मस्याम	641 636
Consensus		658

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FIG. 4



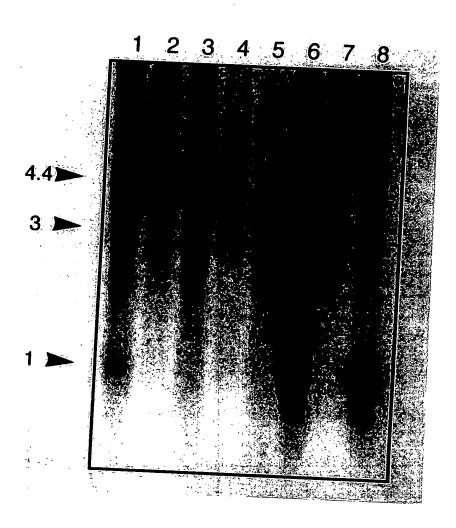
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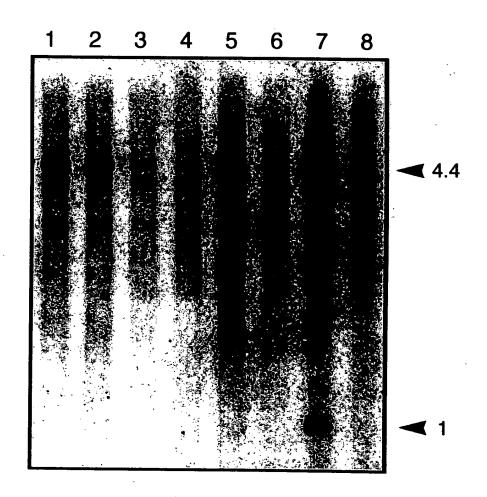
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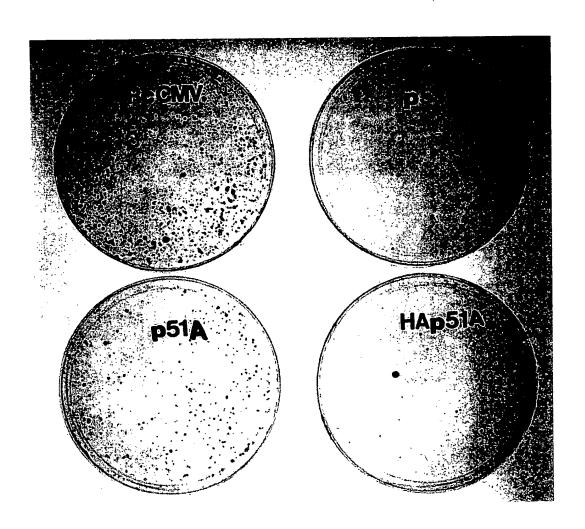


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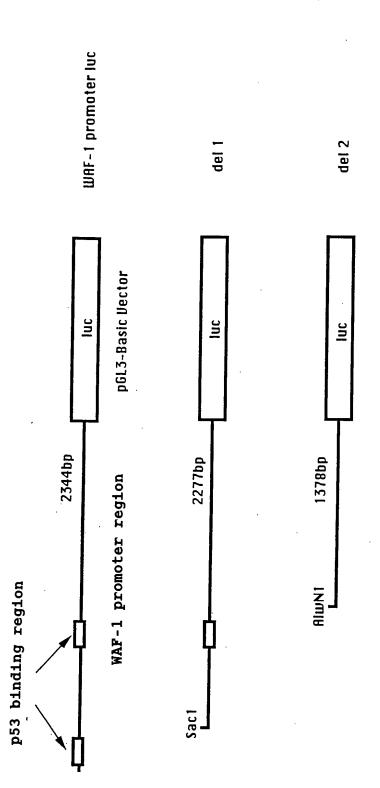


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FIG.



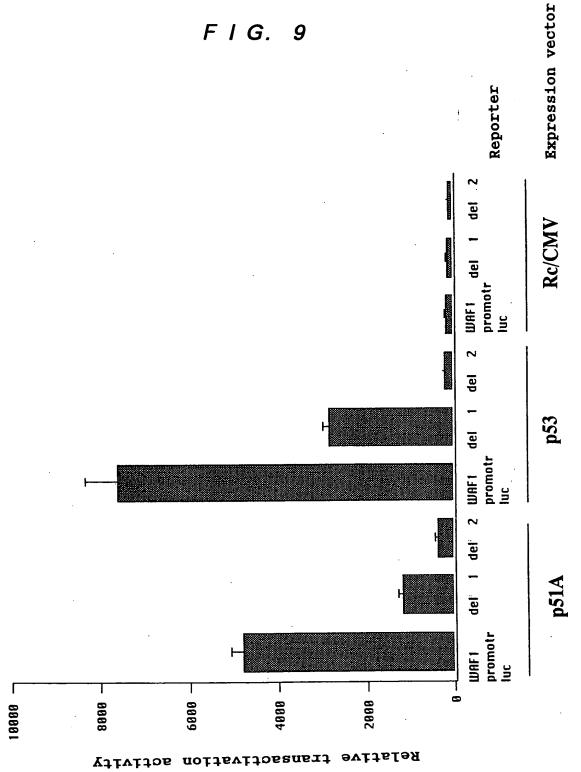
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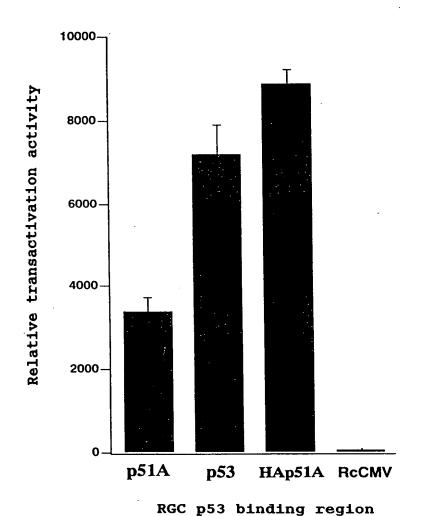


APPROVED	O.G. FIG.		
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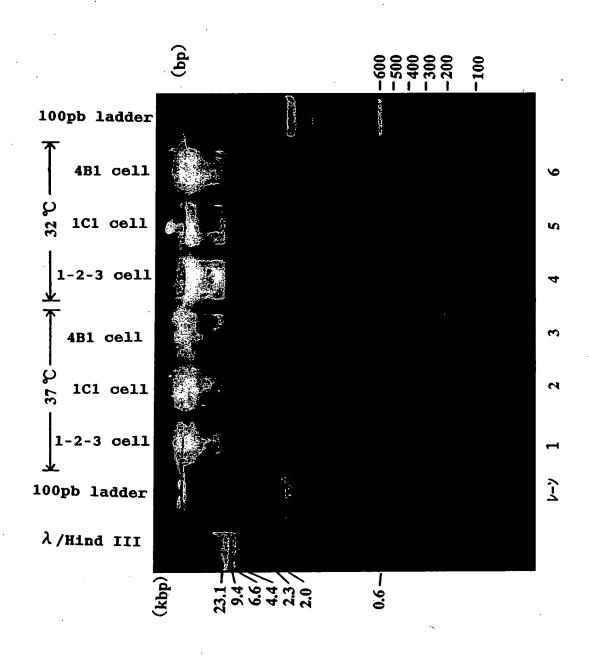
APPHOVED U.G. FIG.

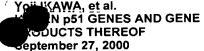
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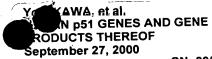
		$\sim$	
mp51 p51B		ATGTCGCAGAGCACCCAGACAAGCGAGTTCCTCAGCCAGAGGTCTTCCAGCATATCTGG L ATGTCCCAGAGCACACAGACAAATGAATTCCTCAGTCCAGAGGTTTTCCAGCATATCTGG ***** ******* ******* ** ******* ******	60 60
mp51	61	GATTTTCTGGAACAGCCTATATGCTCAGTACAGCCCATCGAGTTGAACTTTGTGGATGAA	
p518	61	GATTTTCTGGAACAGCCTATATGTTCAGTTCAGCCCATCGACTTGAACTTTGTGGATGAA ###########################	120
mp51	121	CCTTCCGAAAATGGTGCAACAACAAGATTGAGATTAGCATGGATTGTATCCGCATGCAA	180
p51B	121	CCATCAGAAGATGGTGCGACAAACAAGATTGAGATTAGCATGGACTGTATCCGCATGCAG	180
mp51	181	GACTCAGACCTCAGTGACCCCATGTGGCCACAGTACACGAACCTGGGGCTCCTGAACAGC	240
p51B	181	GACTCGGACCTGAGTGACCCCATGTGGCCACAGTACACGAACCTGGGGCTCCTGAACAGC	240
mp51	241	ATGGACCAGCAGATTCAGAACGGCTCCTCGTCCACCAGCCCCTACAACACAGACCACGCA	300
p51B	241	ATGGACCAGCAGATTCAGAACGGCTCCTCGTCCACCAGTCCCTATAACACAGACCACGCG	300
mp51	301	CAGAATAGCGTGACGGCGCCCTCGCCCTATGCACAGCCCAGCTCCACCTTTGATGCCCTC	360
p518	301	CAGAACAGCGTCACGGCGCCCTCGCCCTACGCACGCCCAGCTCCACCTTCGATGCTCTC	360
mp51	361	TCTCCATCCCTGCCATTCCCTCCAACACAGATTACCCGGGCCCACACAGCTTCGATGTG	420
p518	361	TCTCCATCACCCGCCATCCCCTCCAACACCGACTACCCCAGGCCCGCACAGTTTCGACGTG	420
mp51	421		480
p518	421	TCCTTCCAGCAGTCGAGCACCGCCAAGTCGGCCACCTGGACGTATTCCACTGAAG	480
mp51	481	AAGCTGTACTGCCAGATTGCGAAGACATGCCCCATCCAGATCAAGGTGATGACCCCACCC	540
p51B	481	AAACTCTACTGCCAAATTGCAAAGACATGCCCCATCCAGATCAAGGTGATGACCCCACCT	540
mp51	541	CCACAGGGCGCTGTTATCCGTGCCATGCCTGTCTACAAGAAAGCTGAGCATGTCACCGAG	600
p518	541	CCTCAGGGAGCTGTTATCCGCGCCATGCCTGTCTACAAAAAGCTGAGCACGTCACGGAG	600
mp51	601	GTTGTGAAACGATGCCCTAACCATGAGCTGAGCCGTGAGTTCAATGAGGGACAGATTGCC	660
p51B	601	GTGGTGAAGCGGTGCCCCAACCATGAGCTGAGCCGTGAATTCAACGAGGGACAGATTGCC	660
mp51	661	CCTCCCAGTCATCTGATTCGAGTAGAAGGGGAACAGCCATGCCCAGTATGTAGAAGATCCT	720
p518	661	CCTCCTAGTCATTTGATTCGAGTAGAGGGGAACAGCCATGCCCAGTATGTAGAAGATCCC	720
mp51	721	ATCACGGGAAGGCAGAGCGTGCTGGTCCCTTATGAGCCACCACAGGTTGGCACTGAATTC	780
p51B	721	ATCACAGGAAGACAGAGTGTGCTGGTACCTTATGAGCCACCCAGGTTGGCACTGAATTC	780

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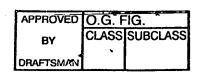
mp51 p51B	781 781	ACAACAGTCCTGTACAATTTCATGTGTAACAGCAGCTGCGTCGGAGGAATGAACAGACGT ACGACAGTCTTGTACAATTTCATGTGTAACAGCAGTTGTGTTGTAGAGGGATGAACCGCCGT ** ***** ***************** ** ** ***** ****	840 840
mp51 p51B	841 841	CCAATTTTAATCATCGTTACTCTGGAAACCAGAGATGGGCAAGTCCTGGGCCGACGCTGC CCAATTTTAATCATTGTTACTCTGGAAACCAGAGATGGGCAAGTCCTGGGCCGACGCTGC *********************************	900 900
mp51 p51B	901 901	TTTGAGGCCCGGATCTGTGCTTGCCCAGGAAGACACCGGAAGGCAGATGAAGACAGCATC TTTGAGGCCCGGATCTGTGCTTGCCCAGGAAGACAGGCAGG	960 960
mp51 p51B		AGAAAGCAGCAAGTATCGGACAGCGCCAAAGAACGGCGATGGTACGAAGCGCCCTTTCCGT AGAAAGCAGCAAGTTTCGGACAGTACAAAGAACGGTGATGGTACGAAGCGCCCGTTTCGT **************************	1020 1020
mp51 p51B		CAGAATACACAGGGAATCCAGATGACTTCCATCAAGAAACGGAGATCCCCAGATGATGAG CAGAACACACATGGTATCCAGATGACATCCATCAAGAAACGAAGATCCCCAGATGATGAA **** **** ** ********** ************	1080
mp51 p51B		CTGCTGTACCTACCAGTGAGAGGTCGTGAGACGTACGAGATGTTGCTGAAGATCAAAGAG CTGTTATACTTACCAGTGAGGGGCCGTGAGACTTATGAAATGCTGTTGAAGATCAAAGAG *** * *** ******** ** ******* ** ** **	1140 1140
mp51 p51B		TCACTGGAGCTCATGCAGTACCTCCCTCAGCACACGATCGAAACGTACAGGCAGCAGCAG TCCCTGGAACTCATGCAGTACCTTCCTCAGCACAATTGAAACGTACAGGCAACAGCAA	
mp51 p51B		CAGCAGCAGCACCAGCACCTACTTCAGAAACAGACCTCGATGCAGTCTCAGTCTTCATAT CAGCAGCAGCACCAGCACTTACTTCAGAAACAGACCTCAATACAGTCTCCATCTTCATAT ************************	1260 1260
mp51 p51B	1261 1261	GGCAACAGTTCCCCACCTCTGAACAAARTGAACAGCATGAACAAGCTGCCTTCCGTGAGC GGTAACAGCTCCCCACCTCTGAACAAARTGAACAGCATGAACAAGCTGCCTTCTGTGAGC ** **** *****************************	1320 1320
		CAGCTTATCAACCCACAGCAGCGCAATGCCCTCACTCCCACCACCATGCCTGAGGGCATG CAGCTTATCAACCCTCAGCAGCGCCAACGCCCTCACTCCTACAACCATTCCTGATGGCATG ************************************	1380
mp51 p51B		GGAGCCAACATTCCTATGATGGGCACTCACATGCCAATGGCTGGAGACATGAATGGACTC GGAGCCAACATTCCCATGATGGGCACCCACATGCCAATGGCTGGAGACATGAATGGACTC	1440 1440
		AGCCCTACCCAAGCTCTCCCTCCACTCTCCATGCCCTCCACCTCCACTGCACCCCAAGCCCCACGCACCCCACCCCCCCC	
		CCACCCCCTACCCACACACTGCAGCATTGTCAGTTTCTTAGCAAGGTTGGGCTGCTCA CCACCTCCGTATCCCACAGATTGCAGCATTGTCAGTTTCTTAGCGAGGTTGGGCTGTTCA ***** ** ** ******* *************** ****	

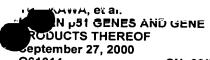


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mp51	1561	TCATGCCTGGACTATTTCACGACCCAGGGGCTGACCACCATCTATCAGATTGAGCATTAC	1620
p51B	1561		1620
•		***** ******************	- 1777
•			
mp51	1621	TCCATGGATGATTTGGCAAGTCTGAAGATCCCTGAACAGTTCCGACATGCCATCTGGAAG	1680
p51B	1621		
•		******* **** ****** ******* ****** ** *	7000
mp51	1681	GGCATCCTGGACCACAGGCAGCTGCACGACTTCTCCTCACCTCCTCATCTCCTGAGGACC	1740
p51B	1681	GGCATCCTGGACCACCGGCAGCTCCACGAATTCTCCTCCCCTTCTCATCTCCTGCGGACC	1740
		有有有有有有有有有有有有有 有有有有有 有有有有者 经存储的 经存储 医医疗性经疗性 计大型性的	<b></b>
mp51	1741		1800
p51B	1741	CCAAGCAGTGCCTCTACAGTCAGTGTGGGCCTCCAGTGAGACCCGGGGTGAGCGTGTTATT	1800
		有有有效 使有有有有有有有 有数据的复数形式 医动物性 医皮肤性 医皮肤性 医皮肤性 医皮肤性 医皮肤性 医皮肤性 医皮肤性 医皮肤	
mp51	1801	GATGCCGTGCGCTTACCCTCCGCCAGACCATCTCTTTTCCACCCCGTGACGAGTGGAAT	. 1060
p518	1801	GATGCTGTGCGATTCACCCTCCGCCAGACCATCTCTTTCCCCACCCCGAGATGAGTGGAAT	
F	7001	CATCOL STATE CONTROL OF THE CONTROL	1860
		· · · · · · · · · · · · · · · · · · ·	
mp51	1861	GATTTCAACTTTGACATGGATTCTCGTCGCAACAAGCAGCAGCGTATCAAAGAGGAAGGA	1920
p518	1861	GACTTCAACTTTGACATGGATGCTCGCCGCAATAAGCAACAGCGCATCAAAGAGGAGGG	1920
F +	2007	* * * * * * * * * * * * * * * * * * *	1920
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mp51	1921	GAA 1923	
p51B	1921		
2-11	1321	4.4	





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mp51BnAA p51B aa	MSQSTQTSEFLSPEVFQHIWDFLEQPICSVQPIELNFVDEPSENGATNKIEISMDCIRMQ MSQSTQTNEFLSPEVFQHIWDFLEQPICSVQPIDLNFVDEPSEDGATNKIEISMDCIRMQ ****** ******************************	60 60
mp51BnAA p51B aa	DSDLSDPMWPQYTNLGLLNSMDQQIQNGSSSTSPYNTDHAQNSVTAPSPYAQPSSTFDAL .DSDLSDPMWPQYTNLGLLNSMDQQIQNGSSSTSPYNTDHAQNSVTAPSPYAQPSSTFDAL ************************************	120 120
mp518nAA p518 aa	SPSPAIPSNTDYPGPHSFDVSFQQSSTAKSATWTYSTELKKLYCQIAKTCPIQIKVMTPP SPSPAIPSNTDYPGPHSFDVSFQQSSTAKSATWTYSTELKKLYCQIAKTCPIQIKVMTPP ***********************************	180 180
mp51BnAA p51B aa	PQGAVIRAMPVYKKAEHVTEVVKRCPNHELSREFNEGQIAPPSHLIRVEGNSHAQYVEDP PQGAVIRAMPVYKKAEHVTEVVKRCPNHELSREFNEGQIAPPSHLIRVEGNSHAQYVEDP ************************************	240 240
mp51BnAA p51B aa	ITGRQSVLVPYEPPQVGTEFTTVLYNFMCNSSCVGGMNRRPILIIVTLETRDGQVLGRRC ITGRQSVLVPYEPPQVGTEFTTVLYNFMCNSSCVGGMNRRPILIIVTLETRDGQVLGRRC	300 300
mp51BnAA p51B &&	FEARICACPGRDRKADEDSIRKQQVSDSAKNGDGTKRPFRQNTEGIQMTSIKKRRSPDDE FEARICACPGRDRKADEDSIRKQQVSDSTKNGDGTKRPFRQNTEGIQMTSIKKRRSPDDE	360 360
mp51BnAA p51B aa	LLYLPVRGRETYEMLLKIKESLELMQYLPQHTIETYRQQQQQQHQHLLQKQTSMQSQSSY LLYLPVRGRETYEMLLKIKESLELMQYLPQHTIETYRQQQQQQHQHLLQKQTSIQSPSSY	420 420
mp51BnAA p51B aa	GNSSPPLNKMNSMNKLPSVSQLINPQQRNALTPTTMPEGMGANIPMMGTHMPMAGDMNGL GNSSPPLNKMNSMNKLPSVSQLINPQQRNALTPTTIPDGMGANIPMMGTHMPMAGDMNGL ************************************	
mp51BnAA p51B aa	SPTQALPPPLSMPSTSECTPPPPYPTDCSIVSFLARLGCSSCLDYFTTQGLTTIYQIEHY SPTQALPPPLSMPSTSECTPPPPYPTDCSIVSFLARLGCSSCLDYFTTQGLTTIYQIEHY	
mp518nAA p51B aa	SMDDLASLKIPEQFRHAIWKGILDERQLHDFSSPPHLLRTPSGASTVSVGSSETRGERVI SMDDLASLKIPEQFRHAIWKGILDERQLHEFSSPSHLLRTPSSASTVSVGSSETRGERVI ************************************	600 600
mp51BnAA p51B aa	DAVRFTLRQTISFPPRDEWNDFNFDMDSRRNKQQRIKEEGE 641 DAVRFTLRQTISFPPRDEWNDFNFDMDARRNKQQRIKEEGE 641	

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